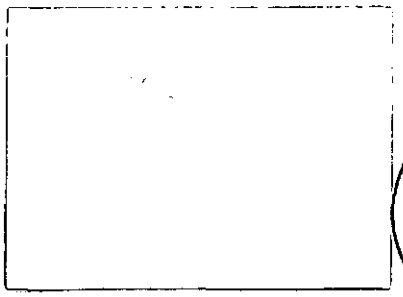


April 18, 2012

Ms. Becky France
Department of Environmental Quality
West Central Regional Office
3019 Peters Creek Road
Roanoke, Virginia 24019

Chesapeake Custom Chemical Corporation
PO Box 615
126 Reservoir Road
Ridgeway, Virginia 24148

Virginia Pollution Abatement Permit #VPA – 2001

Dear Ms. France,

Per your recent e-mail I have attached is a recent schematic including a key of the storage tanks currently utilized at our Ridgeway manufacturing facility. It is my understanding that we are to update this information on annual bases and will in the future include an update with the year end reporting.

Please note my business email is currently: afrench@chesapeakechemical.com.

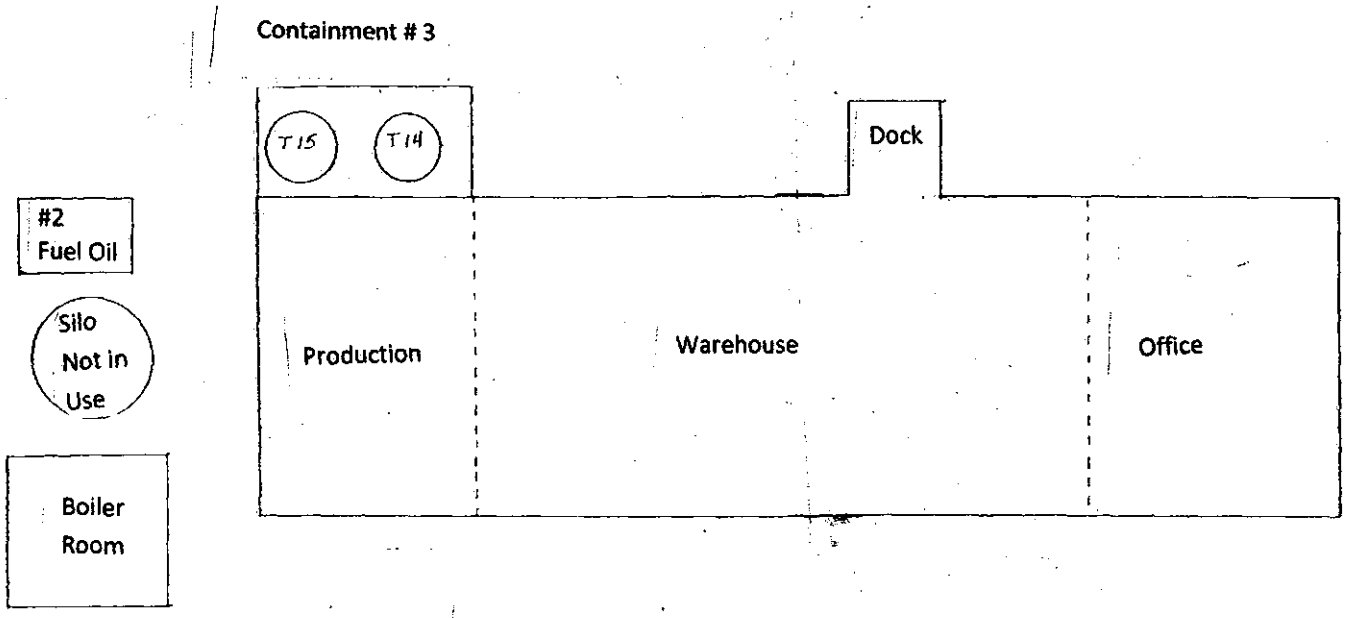
Please let me know if you require additional information.

Sincerely,
J. Allen French
President
Chesapeake Custom Chemical

Chesapeake Custom Chemical
126 Reservoir Road
Ridgway, VA 24148

TANK FARM SCHEMATIC

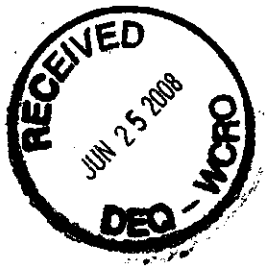
Revised 4/11/12 by MC



Tank #	Contents	Gallons	Material
T-1	not in use	30,000	carbon
T -2	not in use	15,500	carbon
T - 3	not in use	15,500	carbon
T - 4	not in use	15,500	carbon
T - 5	not in use	15,500	carbon
T - 6	not in use	30,000	carbon
T - 7	Corrugation Adhesive	20,000	carbon
T - 8	not in use	20,000	carbon
T - 9	not in use	20,000	carbon
T - 10	not in use	20,000	carbon
T - 11	Acetone	20,000	carbon
T - 12	Acetone	6,000	carbon
T - 13	Hexamine in Water	20,000	ss
T - 14	Formaldehyde	12,000	ss
T - 15	Water	7,700	fiberglass
T - 16	Hexamine in Water	7,700	fiberglass
T - 17	Hexamine in Water	8,000	plastic

VIRGINIA POLLUTION ABATEMENT

PERMIT APPLICATION



FORM A
ALL APPLICANTS

Department of Environmental Quality

Becky

RECEIVED
MAR 30 2011
DEQ - BRRO

VIRGINIA POLLUTION ABATEMENT PERMIT APPLICATION
FORM A
ALL APPLICANTS

ENTERED

1. Facility Name: Chesapeake Custom Chemical Corp.

   County and Location: Henry County

   Address: 126 Reservoir Road

   Ridgeway VA. 24148

2. Legal Name of Owner: Chesapeake Custom Chemical Corp.

   Address: 126 Reservoir Road (PO Box 615)

   Telephone Number: 276-956-3145

3. Facility Contact: Allen French

   Title: President

   Address: (if different)

   Telephone Number: 910-617-3084 mobile

4. Existing permits (e.g., IWND, VPA, NPDES; RCRA; UIC; PSD; other:

Agency	Permit Type	Number
DEQ	Air	30792
DEQ	Storm water	VAR 051640
DEQ	Pollution Abatement	VPA 02001
Agency	Permit Type	Number

5. Nature of Business: Manufacture of Biodiesel and Adhesives (Resin) Manufacturing

   SIC Code(s): 2869 ; 2800 ;

6. Type of Waste:

(check blank as appropriate)	Proposed	Existing
Animal Waste (complete Form B)		
Industrial Waste (complete Form C)		✓
Sewage Effluent (complete Form D, Part I)		
Sewage Sludge Infrequent Land Application (complete Form D, Part II)		
Sewage Sludge Frequent Land Application (complete Form D, Part III)		

7. General Location Map:

Provide a general location map which clearly identifies the location of the facility.

Already on file with DEQ

I certify under penalty of law that this document and all information submitted were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering information, the information submitted is to the best of my knowledge true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations. I further certify that I am an authorized signatory as specified in the Permit Regulation (VR680-14-01).

Signature: J. Allen French Date: 3/26/11

Printed Name: J. Allen French

Title: President

VIRGINIA POLLUTION ABATEMENT

PERMIT APPLICATION

FORM C
INDUSTRIAL WASTE

Department of Environmental Quality

VIRGINIA POLLUTION ABATEMENT PERMIT APPLICATION

FORM C

INDUSTRIAL WASTE

PART C-I General Information

1. Facility Name: Chesapeake Custom Chemical Corp.

2. Source(s) of Waste

   a. *Provide a narrative which explains your facility operations and how wastes are produced.*

   See Attachment A

   b. *Attach a line drawing of the facility in block diagram for showing the manufacturing or processing operations and all points where wastes are produced.*

   c. *Explain how sewage from employees is handled (i.e., septic tank/drainfield,sanitary sewer etc.):*

   Septic tank drainfield

d. *Operational Parameters*

Maximum hours/day of operation: 24
Average hours/day of operation: 9
Days/week of operation: 5
Specific months of operation: 12

3. Non-Hazardous Declaration

a. *Statement for Plant Operations*

Is any part of the manufacturing operations, plant processes or waste treatment facilities at these plant facilities under the purview of the "Virginia Hazardous Waste Management Regulations" or the "Virginia Solid Waste Management Regulations?" ✓ *Yes* _____ *No.*

If Yes, please provide a brief explanation of the type of permit or requirements that apply.

We applied for working through First Piedmont and received permisson to dispense of Sitter cake in January 2006. A generators special waste Prosile Application was submitted and approved.

b. *For waste to be land applied, a responsible person, as defined by VR680-14-01, must sign the following statement.*

I certify that the waste described in this application is non-hazardous and not regulated under the Resource Conservation and Recovery Act.

J. Allen French Date 3/26/11
(Signature of Owner)

4. Waste Characterization

a. Wastewater - Provide at least one analysis for each parameter. Upon review, additional analyses may be required by DEQ. we have no wastewater or sludge

Parameter	Concentration	
Flow to treatment	_____	MGD
Flow to storage	_____	MGD
Vol. to treatment	_____	MG
Vol. to storage	_____	MG
Vol. Land applied	_____	MG/year
BOD_5	_____	mg/l
COD	_____	mg/l
TOC	_____	mg/l
TSS	_____	mg/l
Percent Solids	_____	%
pH	_____	S.U.
Alkalinity as $CaCO_3$	_____	mg/l
Nitrogen, (Nitrate)	_____	mg/l
Nitrogen, (Ammonium)	_____	mg/l
Nitrogen, (Total Kjeldahl)	_____	mg/l
Phosphorus, (Total)	_____	mg/l
Potassium, (Total)	_____	mg/l
Sodium	_____	mg/l
	_____	mg/l

b. Sludge - Provide at least one analysis for each parameter. Upon review, additional analyses may be required by DEQ.

Parameter	Concentration*	
Percent Solids	_____	%
Volatile Solids	_____	%
pH	_____	S.U.
Alkalinity as $CaCO_3$**	_____	mg/kg
Nitrogen (Nitrate)	_____	mg/kg
Nitrogen (Ammonium)	_____	mg/kg
Nitrogen (Total Kjeldahl)	_____	mg/kg
Phosphorous (Total)	_____	mg/kg
Potassium (Total)	_____	mg/kg
Lead	_____	mg/kg
Cadmium	_____	mg/kg
Copper	_____	mg/kg
Nickel	_____	mg/kg
Zinc	_____	mg/kg
	_____	mg/kg

* Unless otherwise noted, report results on dry weight basis.

** Lime treated sludges (10% or more lime by dry weight) should be analyzed for percent $CaCO_3$.

Attachment A

Virginia Pollution Abatement Permit Application

Narrative explaining current operations and how wastes are produced

For the purpose of renewing VPA – Permit No. VPA02001

It is noted the permit expires December 22, 2008.

Currently the facility is manufacturing Methyl Esters and Crude Glycerin.

It is our intention and the facility has been previously permitted by Virginia DEQ to additionally manufacture Formaldehyde Based Adhesive Resins. In addition the facility is equipped to manufacture other products from Formaldehyde. The manufacture of Formaldehyde based products may generate liquid regulated wastes. Wastes of this type were generated at this facility for many years and were handled under a pump and haul permit. Prior to manufacturing any Formaldehyde based product we will obtain approval from all appropriate regulatory agencies. To date we have not manufactured any Formaldehyde based products nor have we brought on site in more than experimental quantities any of the required chemical raw materials for this type production.

Methyl Ester and Crude Glycerin are produced in a 10,000 gallon reactor.

The primary raw material used to manufacture these products comes from a variety of Non-Regulated Triglycerides such as:

Soy Bean Oil, Animal Fats, Corn Oil, Algae Oil, Seashore Mallow, Canola Oil, Mustard Seed Oil, Camelina Oil, Used Vegetable Oils, Jatropha Oil and Grease Trap Oil.

To date the CCC facility has run exclusively Soy Bean Oil and or Refined Animal Fats. Our process is a batch operation and we have the technical expertise to run any of the above Triglyceride materials.

The Triglyceride raw materials used to manufacture our products are stored in Tank #14 located in Containment #3. While we have not yet done so Tank #14 also located in Containment # 3 is available for triglyceride storage and or could be used for Formaldehyde storage. Triglycerides arrive in bulk tanker trucks.

The other raw materials used to manufacture these products are Methanol and Sodium Methylate.

Methanol arrives in bulk tanker trucks and is stored in Tank #11 located in Containment #1 or in Tank #12 located in Containment #2.

Attachment A

Narrative explaining current operations and how wastes are produced.

Our Ridgeway Virginia facility produced only Methyl Esters and Glycerol from 2006 until May of 2010. Due to the expiration of the Biodiesel Tax Credit which made the sale of these products unprofitable we have produced no Methyl Ester or Glycerol since May of 2010. We may produce Methyl Ester and Glycerol in the future as the Biodiesel Tax Credit has been reinstated.

We have not modified our batch manufacturing equipment in any form or fashion. Thus we have the ability to manufacture Methyl Ester and Glycerol as well as many other products which may be manufactured in a batch chemical reactor without adding additional equipment to the facility.

In October of 2010 we shipped our first bulk tanker load of liquid Hexamine solution which is used as a component in adhesive formulations. It is also used in pharmaceuticals as a urinary tract medicine and in the preparation of injectable Glycine.

Liquid hexamine is water soluble and non-hazardous. It is considered an unregulated product by the Department of Transportation and ships as such.

We are preparing this solution in reactor #2. No existing equipment has been modified in any manner. Currently reactor #2 is dedicated to the production of this product only, but could also be used for other production in particular Methyl Ester with no modifications.

The product is currently being produced by dumping bags of Granular Hexamine into the reactor containing water. This operation forms a water white solution which is filtered and pumped to dedicated storage tank number 13 which was previously dedicated to Methyl Ester (Biodiesel) storage or a new tank #16. Bulk chemical tankers are loaded from tank number 13 or 16. It is noted than existing tank #7 is still available to contain Methyl Ester if needed. Water is added to reactor #2 from storage tank #14. It is noted that tanks 14 and 16 have been on site since prior to the purchase of the facility but have not been utilized previously.

There are no air emissions generated during this production.

Reactor #2 and all storage tanks in the facility are located within containments which would contain any possible spills.

Granular hexamine is stored in 55 pound bags on pallets in the existing warehouse. We plan to keep up to four truckloads in inventory at any given time.

No wastes are generated during this production, we utilize our own pumps, lines and dedicated hoses such that we are able to completely empty all production vessels prior to disconnecting. Any drips generated are caught in buckets and returned to the process.

Attachment A

Narrative explaining current operations and how wastes are produced continued.

Any wash water used to clean the reactor either before or after this product or the manufacture of another product will be collected and put into the next batch of product. If for example we wash prior to or after the production of Methyl Ester any wash water would be added to the crude Glycerol produced as a dliuent prior to shipment. It is noted that liquid Hexamine is 60% water thus wash water can always be added to this product.

It is noted that on 2/03/11 Chesapeake Custom Chemical notified DEQ of our intentions to produce a product used as an adhesive binder and water treatment polymer. The product is called PC-540. We produced two batches of this product in March of 2011 and expect to manufacture a comparable amount of this product in the months to come.

The product does have air emissions. Emission calculations for this product were performed by RST Engineering have been submitted to DEQ and are far below our existing air permit levels.

PC -540 is water soluble and non-hazardous. It is considered an unregulated product by the Department of Transportation and ships as such.

We are producing PC- 540 in reactor #1. No existing equipment has been modified in any manner.

The product is manufactured by first adding solid Dicyandiamide and Ammonium Chloride to a reactor containing water. Liquid Formaldehyde is then pumped into the reactor and an exothermic reaction takes place. The rate of reaction is controlled by the rate Formaldehyde is added and by internal reactor cooling coils. Any vapors which from during the exothermic phase condense in an overhead condenser and are returned to the reactor in liquid form.

Formaldehyde is completely consumed during the reaction and is not detectable in the finished product which is packaged into 55 gallon drum or 275 gallon totes.

Dicyandiamide and Ammonium Chloride raw material are stored in our warehouse on pallets in 55 pound bags. Formaldehyde raw material is stored in our warehouse in 275 gallon totes. We do not plan to store more than 90,000 pound of Dicyandiamide at a time and no more than 45,000 pounds of Ammonium Chloride and Formaldehyde at any given time.

No wastes are generated during this production, we utilize our own pumps, lines and dedicated hoses such that we are able to completely empty all production vessels prior to disconnecting. Any drips generated are caught in buckets and returned to the process.

Any wash water used to clean the reactor either before or after the manufacture of this product or another product will be collected and put into the next batch of product.

Attachment A

Narrative explaining current operations and how wastes are produced continued.

In addition Chesapeake Custom Chemical notified DEQ of our intention to produce an adhesive polymer used to stop the intrusion of water into sewer pipes on 3/22/11/. The product is called AV-118 and will be produced in reactor #1 with no modifications of any kind.

AV- 118 is water soluble and non-hazardous. It is considered an unregulated product by the Department of Transportation and ships as such.

The product does have air emissions. Emission calculations for this product were performed by RST Engineering are on file in our Ridgeway facility and are well below our existing permit limits.

The product will be produced by first pumping a bulk tanker load of Acrylamide solution into reactor #1 containing water. Formaldehyde is added from totes and an exothermic reaction occurs. The reaction is controlled by the rate of Formaldehyde addition and with external cooling coils inside the reactor. Vapors which form during the reaction are condensed in an over head condenser and are returned to the reactor.

We will not store any Acrylamide on site it will be reacted to finished product as soon as it is unloaded into reactor #1. We will store liquid Formaldehyde in totes in the warehouse. We will not store more than 45,000 pound of Formaldehyde in totes at a time.

The finished product will be packaged into 275 gallon totes and or 15 gallon drums.

No wastes are generated during this production, we utilize our own pumps, lines and dedicated hoses such that we are able to completely empty all production vessels prior to disconnecting. Any drips generated are caught in buckets and returned to the process.

Any wash water used to clean the reactor either before or after the manufacture of this product or another product will be collected and put into the next batch of product.

In addition Chesapeake Custom Chemical notified DEQ of our intention to produce an adhesive polymer used to improve the water resistance of adhesives on 3/22/11/. The product is called Ketone / Aldehyde resin and will be produced in reactor #1 with no modifications of any kind.

Ketone / Aldehyde is water soluble and non-hazardous. It is considered an unregulated product by the Department of Transportation and ships as such.

Ketone / Aldehyde has up to 0.3% free Formaldehyde and does have minor air emissions. Prior to actual producing this product RST Engineering will perform detailed emission calculations to ensure that we are well below our permit limits.

Attachment A

Narrative explaining current operations and how wastes are produced continued.

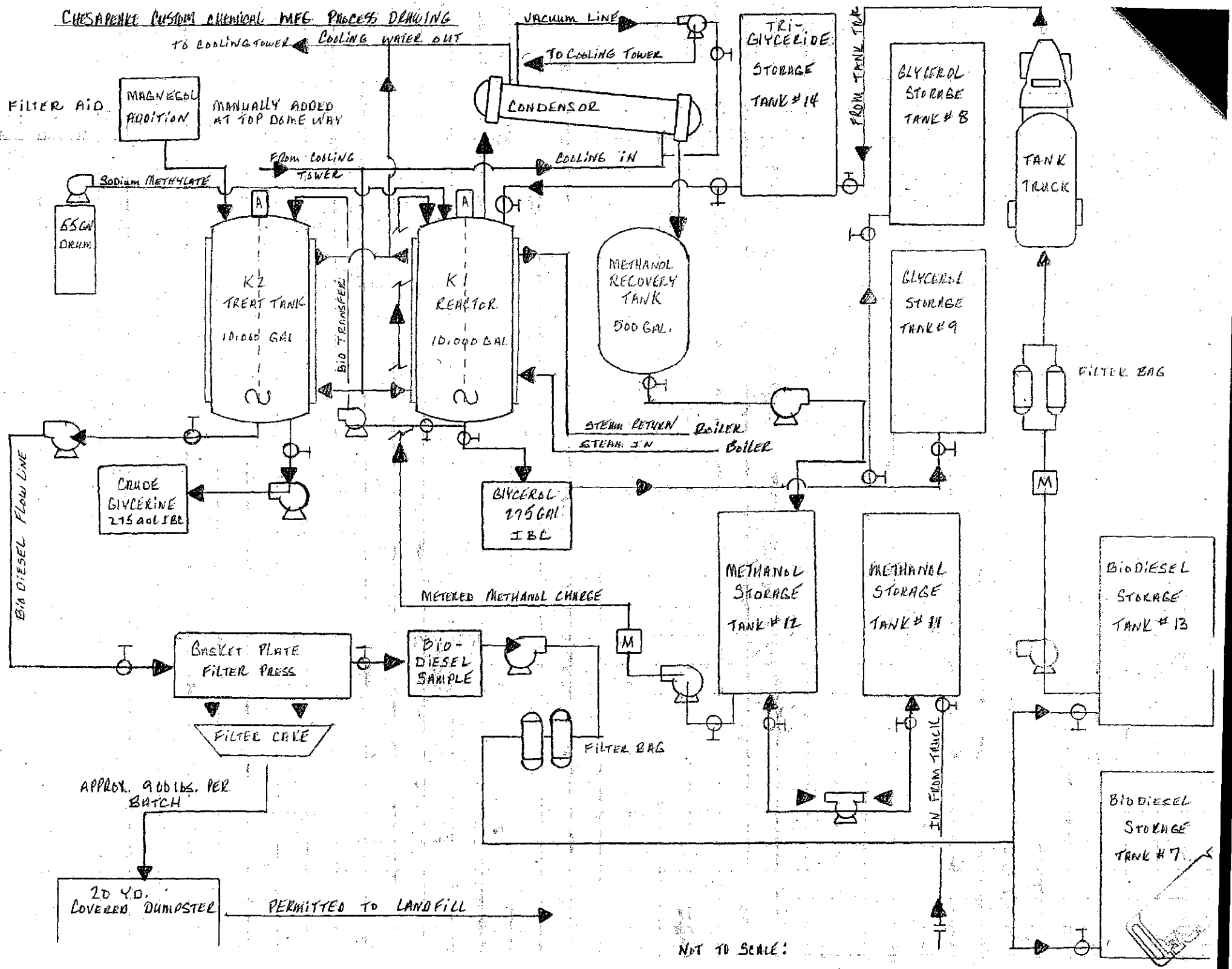
The product will be produced by first unloading a bulk tanker truck load of Formaldehyde into reactor #1. The Formaldehyde will be made alkaline using Sodium or Potassium Hydroxide. Acetone will be added slowly over time which will result in an exothermic condensation reaction. The rate of reaction will be controlled using internal reactor cooling coils and by the rate of Acetone addition.

We will not initially store bulk Formaldehyde on site it will be reacted to finished product as soon as it is unloaded into reactor #1. Sodium or Potassium Hydroxide and Acetone will be added from totes or drums. We will store less than a 45,000 pound truck load of each item.

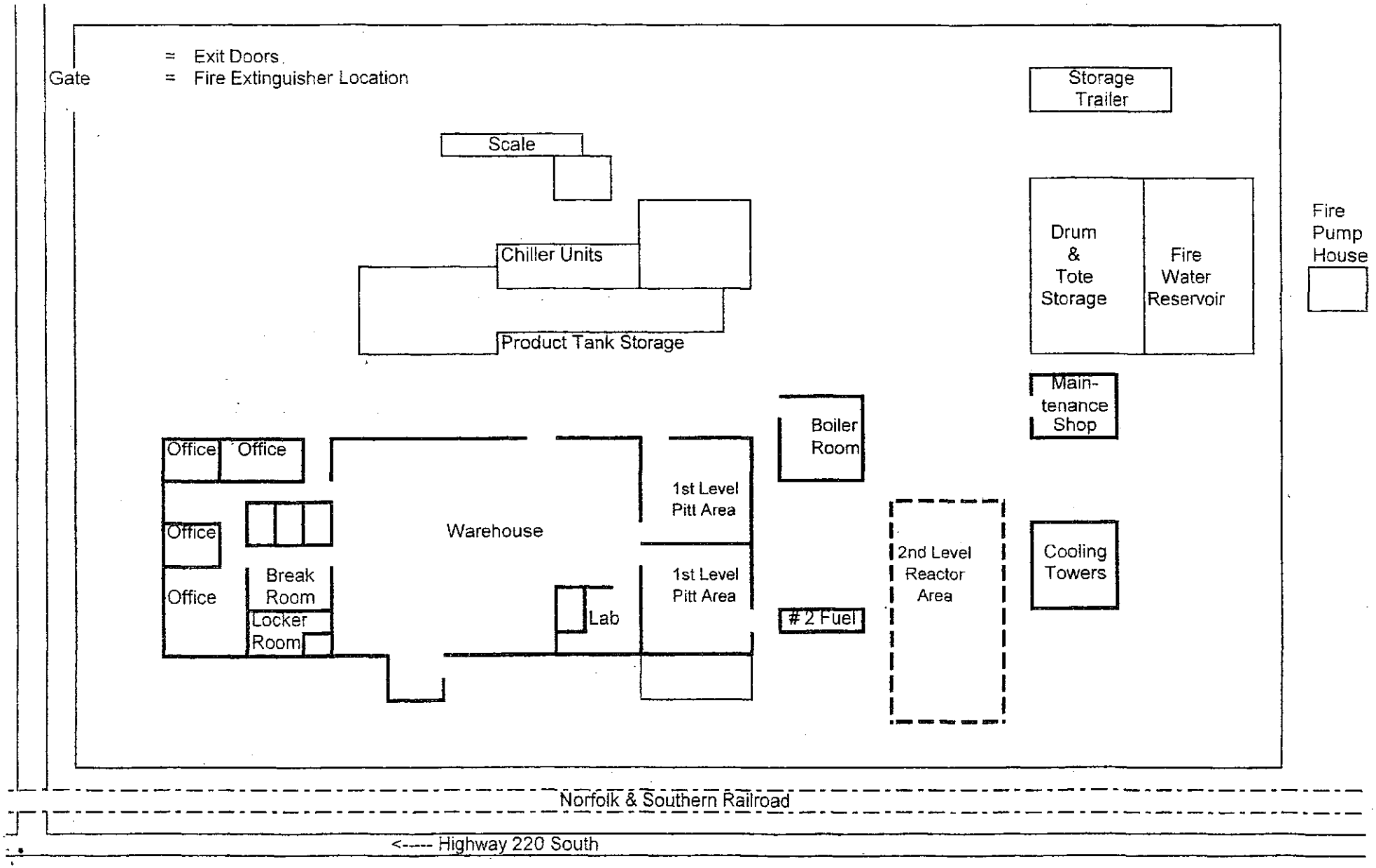
The finished product will be shipped in bulk tankers, 275 gallon totes or 500 pound drums.

No wastes are generated during this production, we utilize our own pumps, lines and dedicated hoses such that we are able to completely empty all production vessels prior to disconnecting. Any drips generated are caught in buckets and returned to the process.

Any wash water used to clean the reactor either before or after the manufacture of this product or another product will be collected and put into the next batch of product.


CHESAPEAKE CUSTOM CHEMICAL MFG. PROCESS DRAWING
TO COOLING TOWER
COOLING WATER OUT
VACUUM LINE
TO COOLING TOWER
CONDENSOR
TRI-GLYCERIDE STORAGE TANK #14
FROM TANK TRUK
GLYCEROL STORAGE TANK # 8
TANK TRUCK
FILTER AID
MAGNESOL ADDITION
MANUALLY ADDED AT TOP DOME WAY
FROM COOLING TOWER
COOLING IN
Sodium METHYLATE
55 GAL DRUM
K2 TREAT TANK 10,000 GAL
BIO TRANSFER
K1 REACTOR 10,000 GAL
METHANOL RECOVERY TANK 500 GAL.
GLYCEROL STORAGE TANK #9
FILTER BAG
STEAM RETURN
STEAM IN
Boiler
Boiler
CRUDE GLYCERINE 275 gal IBC
GLYCEROL 275 GAL IBC
BIO DIESEL FLOW LINE
METERED METHANOL CHARGE
METHANOL STORAGE TANK # 12
METHANOL STORAGE TANK # 11
BIODIESEL STORAGE TANK # 13
GASKET PLATE FILTER PRESS
BIO-DIESEL SAMPLE
FILTER CAKE
FILTER BAG
IN FROM TRUCK
APPROX. 900 lbs. PER BATCH
BIODIESEL STORAGE TANK # 7
20 Y.D. COVERED DUMPSTER
PERMITTED TO LANDFILL
NOT TO SCALE!

Chesapeake Custom Chemical
Evacuation Site Plan



0305

4. Waste Characterization

a. *Wastewater - Provide at least one analysis for each parameter. Upon review, additional analyses may be required by DEQ.*

no waste water

Parameter	Concentration	
Flow to treatment	_____	MGD
Flow to storage	_____	MGD
Vol. to treatment	_____	MG
Vol. to storage	_____	MG
Vol. Land applied	_____	MG/year
BOD_5	_____	mg/l
COD	_____	mg/l
TOC	_____	mg/l
TSS	_____	mg/l
Percent Solids	_____	%
pH	_____	S.U.
Alkalinity as $CaCO_3$	_____	mg/l
Nitrogen, (Nitrate)	_____	mg/l
Nitrogen, (Ammonium)	_____	mg/l
Nitrogen, (Total Kjeldahl)	_____	mg/l
Phosphorus, (Total)	_____	mg/l
Potassium, (Total)	_____	mg/l
Sodium	_____	mg/l
	_____	mg/l

b. *Sludge - Provide at least one analysis for each parameter. Upon review, additional analyses may be required by DEQ.*

no Sludge

Parameter	Concentration*	
Percent Solids	_____	%
Volatile Solids	_____	%
pH	_____	S.U.
Alkalinity as $CaCO_3$**	_____	mg/kg
Nitrogen (Nitrate)	_____	mg/kg
Nitrogen (Ammonium)	_____	mg/kg
Nitrogen (Total Kjeldahl)	_____	mg/kg
Phosphorous (Total)	_____	mg/kg
Potassium (Total)	_____	mg/kg
Lead	_____	mg/kg
Cadmium	_____	mg/kg
Copper	_____	mg/kg
Nickel	_____	mg/kg
Zinc	_____	mg/kg
	_____	mg/kg

* Unless otherwise noted, report results on dry weight basis.

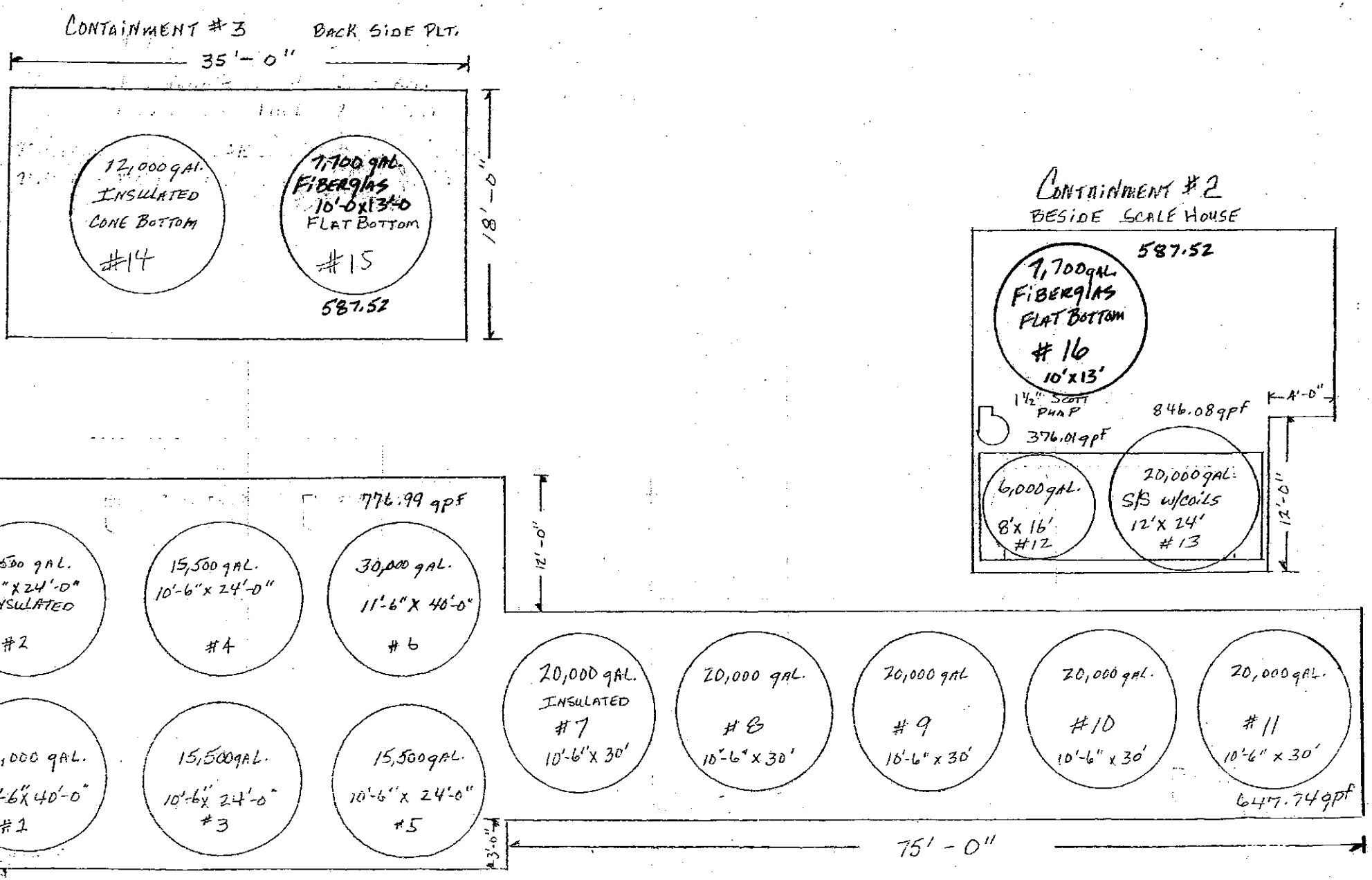
** Lime treated sludges (10% or more lime by dry weight) should be analyzed for percent $CaCO_3$.

CHESAPEAKE CUSTOM CHEMICAL

10-13-05

REVISED 3-12-2011

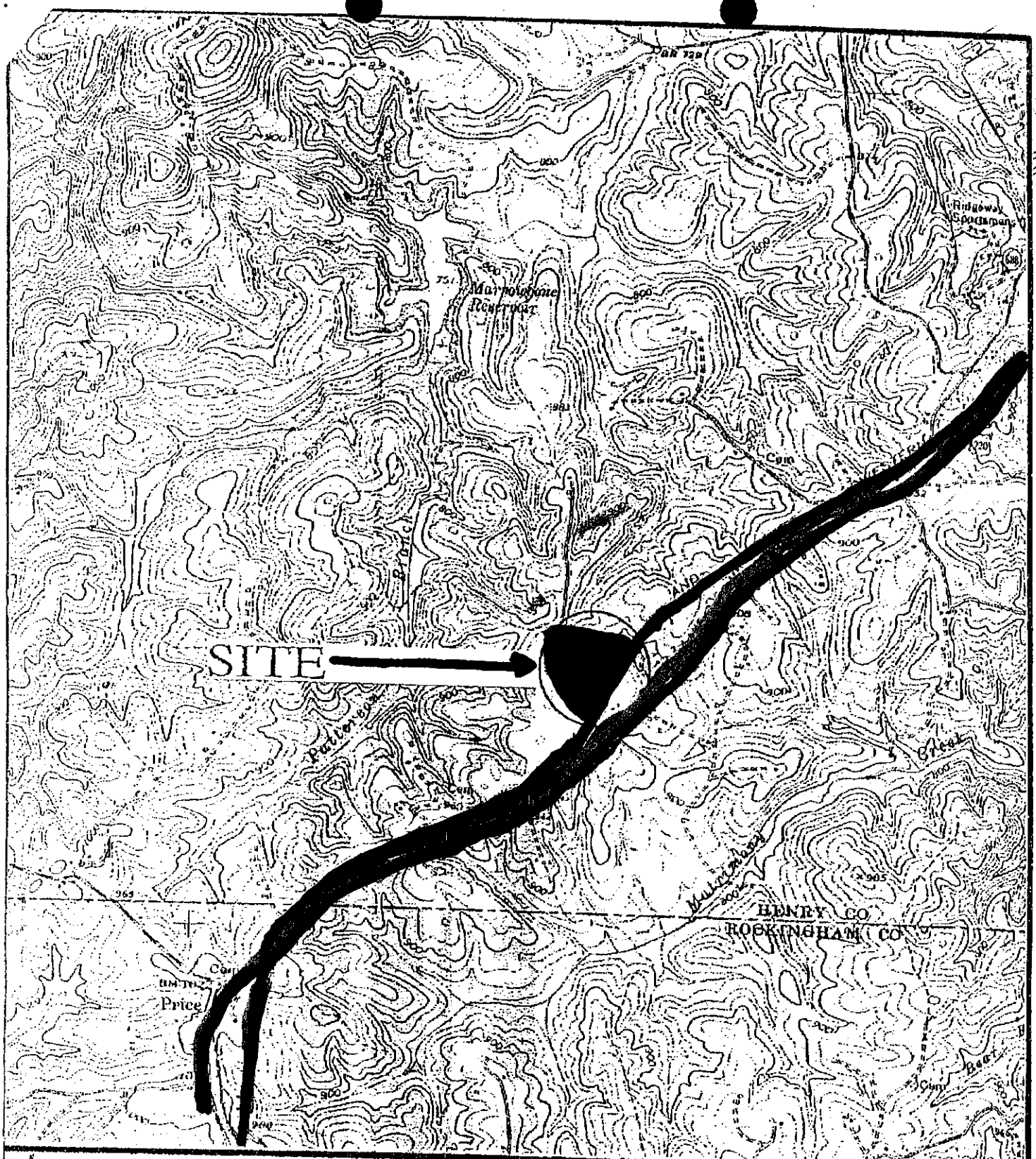
TANK FARM



CONTAINMENT #1

FRONT SIDE PLT.

3/12



SOURCE:

USGS TOPOGRAPHIC MAP
PRICE, VA.; NC QUADRANGLE
DATED 1964 AND
PHOTOINSPECTED 1982
SCALE: 1" = 2000'

ECS LTD
ENGINEERING
CONSULTING
SERVICES, LTD

FIGURE 1

SITE LOCATION MAP

126 RESERVOIR ROAD
RIDGEWAY, VA

ECS PROJECT G-5400

Site = Green
Norfolk - Southern Railroad = Blue
Historic Trail = Red